

REMARKS

Entry of the foregoing, reexamination and further and favorable reconsideration of the subject application in light of the following remarks, pursuant to and consistent with 37 C.F.R. § 1.129, are respectfully requested. By the present amendment, dependent claims 66 and 67 have been added. No new matter has been added and the proposed amendments do not raise new issues or necessitate the undertaking of any additional search of the art by the Examiner, since all of the elements and their relationships claimed were either earlier claimed or inherent in the claims as Examined. Therefore, this Amendment should allow for immediate action by the Examiner.

On February 3, 2006 an Advisory Action was mailed to the Applicant. In this Advisory Action, it was noted that the amended claims submitted December 7, 2005 were entered and rejected.

The Examiner asserted, in the rejection, that there was an issue of substantive interference remaining based on the Applicant's attempt to obtain a patent on claims directed to expression constructs for making proteins lacking the Glu Ala protease site. To support this assertion, the Examiner stated that the Applicant's claims were encompassed by the Count in Interference 102,728 and that according to 37 C.F.R. § 1.658(c) all issues which could have been raised in an additional interference are estopped from later being raised in an *ex parte* action. The Examiner is incorrect, the current claims could not have been included in the interference.

The issue forming the basis for the rejection could not have been raised during the interference because such generic claims were not present in the Brake '008 patent in the interference. Therefore, there was no way in the interference to raise the issue of the patentability of the current claims. The Board of Patent Appeals and Interferences has held that a party cannot seek to add a claim to an application in interference and request that it be

designated as not corresponding to the Count. *L'Esperance v. Nishimoto*, 18 USPQ2d 1534 (Bd. Pat. App. & Int. 1991). In addition, the Applicant could not have requested a second count in the interference containing the presently claimed subject matter because the Brake '008 patent had no corresponding claims that would interfere with Applicant's current claims.

In view of this and further arguments, Applicant respectfully submits that the rejections set forth by the Examiner should be withdrawn as no issue of substantive interference remains and the Applicant is not estopped based on Interference 102,728.

In the present Reply, Applicants again take the opportunity to summarize the present claims and their relation to the Count in the interference. Specifically, the Count in the interference read as follows:

A DNA construct comprising a sequence of the following formula:

5'-L-S-Gene*-3', where:

L encodes a *Saccharomyces* alpha-factor leader sequence recognized by a yeast host for secretion;

S encodes a spacer sequence providing processing signals resulting in the enzymatic processing by said yeast host of a precursor polypeptide encoded by L-S-Gene* into the polypeptide encoded by Gene*, S containing the sequence 5'-R₁-R₂-3' immediately adjacent to the sequence Gene*, R₁ being a codon for lysine or arginine, R₂ being codon for arginine, with the proviso that S not contain the sequence 5'-R₃-R₄-X-3', where R₃=R₁, R₄=R₂,

and X encodes a processing signal for dipeptidylaminopeptidase A; and Gene* encodes a polypeptide foreign to *Saccharomyces*.

The subject matter of the Count in Interference 102,728 was a DNA construct which could express a foreign protein in yeast, wherein the foreign protein does not have any Glu-Ala sequences at the N-terminus. In contrast, the present claims are generic to DNA constructs which can express a foreign protein in yeast, regardless of whether the foreign protein contains Gly-Ala sequences at the N-terminus. The present claims also recite specific proteins which may be expressed, which the Count of Interference 102,768 did not.

The Count of Interference 102,728 was actually reduced to practice by Singh as a plasmid termed "p76". p76 was created by altering a construct which is a reduction to

practice of the present claims, namely p60, which produced a protein containing the Glu-Ala sequences (see, e.g., Appendix E to the Amendment dated June 8, 2004).

The Federal Circuit held as a fact in the appeal of the interference decision that p60, a construct within the scope of the present claims, was actually reduced to practice on October 1, 1982, i.e., well before the January 12, 1983 filing date of Brake's U.S. Patent No. 4,870,008 (the Brake '008 patent") in Interference 102,728 - the only date upon which Brake relied in that interference.

The following is a statement of the facts as set forth in our earlier opinion in this case. *Singh v. Brake*, 222 F.3d 1362, 55 USPQ2d 1673 (Fed. Cir. 2000). As we noted in that opinion, the factual context of Singh's alleged conception of the claimed DNA construct is based on his statements to the PTO and other record evidence. Absent qualification, the facts set forth here are not disputed by the parties.

In the course of Singh's attempts to design the claimed DNA construct in August 1982, he prepared plasmid p57, a circular DNA molecule containing the alpha-factor leader sequence and a spacer sequence directly adjacent to it. *See Singh Decl.* ¶ 21. During that same month, Singh incorporated the gene for human protein interferon D ("IFN-D") into p57, thereby yielding plasmid p58. *See id.* In p58, the gene was also positioned adjacent to the spacer sequence, such that the leader, spacer, and gene sequences were all oriented in a fashion identical to the claimed construct. From September 6 to 11, 1982, Singh's assistant, Dr. June Lugovoy, isolated the DNA segment from p58 containing the alpha-factor leader, spacer, and IFN-D sequence, and inserted that segment (hereinafter "the p60 DNA construct") into yeast plasmid YEp9PT ("p60"). *See id.* ¶ 26. **Plasmid p60 was then introduced into yeast cells to determine whether the p60 DNA construct would generate IFN-D. *See id.* ¶ 27.**

On October 1, 1982, protein sequencing chemist Bill Kohr informed Singh that the IFN-D expressed by yeast cells transformed with p60 contained eight additional amino acids not normally present in natural IFN-D. *See id.* ¶ 33.

65 USPQ2d 1641, 1643 (Fed. Cir. 2003) (Emphasis added.) The Patent Office in considering this same issue determined by the Federal Circuit, must likewise adopt the findings determined by the appeals court, unless those findings have been undermined by new evidence. *Fritsch v. Lin*, 21 USPQ2d 1731 (Bd. pat. App. & Int. 1991). In the present case, there are no such undermining findings, and as such, the Patent Office must agree that Singh

reduced to practice the generic invention of the present claims prior to Brake, and as such, there can be no estoppel.

The Examiner has rejected the present claims under 35 U.S.C. §102(g) as being unpatentable over the Count in Interference 102,728. The determination of who was the first to invent the subject matter of the present claims under 35 U.S.C. §102(g) was not the subject of the Interference 102,768. If it had been, then according to the Federal Circuit in the above-noted quote, Singh would indeed have won the interference because Singh reduced to practice the invention of the present claims (e.g., p60) no later than October 1, 1982, two and a half months before Brake's filing date. As such, a rejection of the present claims over the Interference Count under 35 U.S.C. §102(g) is untenable and should be withdrawn. The rejection under 35 U.S.C. §103(a) is likewise untenable.

To support this, the question of who was the first to invent the subject matter of the present claims could not have been raised in Interference 102,728, because such generic claims were not present in Brake's '008 patent

Because Brake had no claims to the separately patentable generic invention, Singh could not even have moved to add such claims to its application in interference. As stated above, a party cannot seek to add a claim to an application in interference and request that it be designated as not corresponding to the Count. *L'Esperance v. Nishimoto*, 18 USPQ2d 1534 (Bd. Pat. App. & Int. 1991).

As a related matter, the Examiner cites *Ex parte Kimura* 55 USPQ2d 1537 (Bd. Pat. App. & Int. 2000) and *In re Kroekel*, 231 U.S.P.Q. 640 (Fed. Cir. 1986) to support his position. Contrary to the Examiner's position, in fact, these two cases support the Applicant's position that estoppel is not a viable rejection of the current claims.

In *Ex parte Kimura* the Board discusses throughout the decision the procedural options the parties could have used to place the separately patentable claims into the interference. The Board indicated that Kimura, who ultimately lost the interference, could

have moved to place its reissue application, already in existence at the time the interference was declared, into the interference, moved to add a separate count and moved to have the opponent add a claim corresponding to that count to its application. However, this is in contrast to the situation in *Singh v. Brake*, where Singh, as the applicant who then had no claims to the generic invention, could not force Brake to file a reissue application, add claims to the genus invention, and add that reissue application to the interference. Moreover, Brake had taken the position repeatedly during prosecution of its patent that the generic claims were unpatentable over prior art, but that its species claim was a separately patentable invention. As such, neither party was in a position to add the generic claims to the interference.

The current interference rules state specifically that interfering subject matter exists “if the subject matter of a claim of one party would, if prior art, have anticipated or rendered obvious the subject matter of a claim of the opposing party **and vice versa.**” 37 C.F.R. 41.203(1). (Emphasis added.) While this rule was not in existence at the time the *Singh v. Brake* interference was in progress, the Board has stated in *Winter v. Fujita* 53 USPQ2d 1234, 1243 (Bd. Pat. App. & Int. 1999), reh'g denied, 53 USPQ2d 1478 (BPAI 2000) that the two-way obviousness standard of Rule 41.203 is merely clarification of what was always the standard. As such, since the Singh claims are directed to the generic invention and the claims in the interference were directed to the species invention, the present generic claims could not have been added to the interference, even before the clarification with Rule 41.203.

Likewise, *In re Kroekel* can be distinguished from the present situation. In *Kroekel*, the Count was a phantom Count. In *Singh v. Brake*, the Count was identical to Brake Claim 1. The Federal Circuit said in *Kroekel* that there could be in some cases be two mutually exclusive, but patentably indistinct sets of claims where there was a phantom count. As such, it was not for *Kroekel* to decide that Comstock could not support the broader Count. In *Singh*,

there could not have been two mutually exclusive, but patentably indistinct sets of claims, because the Count was one of Brake's claims.

In *Kroekel*, the Federal Circuit admonished Kroekel for not presenting proofs during the interference that it reduced to practice the generic invention prior to Comstock. In contrast, in *Singh v. Brake*, Singh did indeed present its proofs on the generic invention as an earlier step to the species, and the Federal Circuit specifically found that Singh had reduced to practice the generic invention prior to Brake.

In addition, the Federal Circuit also stated that Kroekel did not argue claims separately, and therefore lost his chance to argue that some of the claims do not dominate the lost count. In fact, the currently pending Singh claims are actually narrower than the lost count in one sense, in that that they refer to the expression of particular proteins. The lost count was a specific leader sequence, but with any protein.

Singh simply could not have requested that there be a second Count, because Brake had no such corresponding generic claims in its '008 patent with which to interfere. In support of the rejection, the Examiner states:

[n]otwithstanding the two-way obviousness test, the issue of priority of invention with respect to the more generic invention, that is, expression of mature and immature proteins, defined by the instant claims, is an issue that could have been raised and decided in an additional interference if Applicant had filed the proper preliminary motions during Interference 102,728, that is, an additional count for the interference representing the generic invention.

The Examiner is wrong. There was absolutely no procedural mechanism for Singh to do so. applicants invite the Examiner to explain what preliminary motions could have been filed, because Applicant is confident that the Examiner will be unable to do so. Party Brake had only a granted patent involved in the *Brake v. Singh* interference as declared in 1991. Since it is not possible to add claims to an issued patent, except by a reissue, which only Brake could file, Party Singh had no way to force Party Brake to add claims to the generic

invention and create an interference-in-fact with respect to that subject matter during the preliminary motions period of the Singh v. Brake interference.

Indeed, facts similar to the present situation have occurred, and the Board of Patent Appeals and Interferences has decided that loss of a species count does not create a *per se* rule of unpatentability for generic claims. In *Ex parte Hardman*, 142 USPQ 329 (Bd. Pat. App. & Int. 1964; a copy of which is provided herewith) the losing party in an interference with a species count submitted an affidavit under Rule 204, in the nature of an affidavit under Rule 131 (which was consistent with testimony in the interference) which showed that he conceived and reduced to practice the generic invention prior to the effective date of the patent, "by virtue of having made prior to said date various species falling under the claimed genus..." *Id.* at 330. In fact, the Board considered a finding to the contrary unjust:

We do not consider [the Examiner's conclusion] to be a just and equitable conclusion. Particularly in a situation where the interference is with a patent, an applicant copying all the claims from the patent which he can make, and as he must (Rule 205(a)), and involving both generic and species claims, priority as to the generic invention by applicant is not necessarily disproved by his not being the first inventor of one species, which species is specifically claimed by the patentee, when it has been fully established that applicant in fact was the first to possess the generic aspects of the invention. In *re Saunders*, 1955, 104 USPQ 394. There is no indication of record that either of the two species was invented by the other party prior to the time that appellant made any one of the other species, or prior to the time that it may be considered appellant made the generic invention.

Id. Likewise here, there is no evidence that Brake invented the species of the Count of the interference prior to the time Singh made the generic invention, because Brake chose rather to rely on its constructive reduction to practice in its January 12, 1983 application.

In the comments to proposed Rule 41.207(b), the Patent Office agrees that the *Hardman* case was correct that there is no *per se* rule of unpatentability for generic claims after a party loses a species count. 69 Fed. Reg. 155 (August 12, 2004), a copy of which is submitted herewith. This is reiterated in the Manual of Patent Examining Procedure (MPEP)

at 2138.01 IV, which specifically explains to Examiners that the loss of an interference count alone does not make its subject matter statutory prior art against the losing party.

In the present application, there has been a determination by the Federal Circuit, that Singh reduced to practice the generic invention of the present claims (e.g., p60) no later than October 1, 1982, and that "[a]bsent qualification, the facts set forth here are not disputed by the parties." As such, Singh is entitled to claims to the generic invention of the present claims, because Singh reduced to practice the invention of the present claims more than two months before Brake arguably constructively reduced to practice the species invention of Interference 102,768. Withdrawal of the rejections is therefore respectfully requested.

It is respectfully submitted that all rejections have been overcome by the above remarks. Thus, a Notice of Allowance is respectfully requested.

In the event that there are any questions relating to this Amendment or to the application in general, it would be appreciated if the Examiner would contact the undersigned attorney by telephone at (202) 373-6000 so that prosecution of the application may be expedited.

Respectfully submitted,
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